NIH Library Class Proposal: Project Management and Reproducibility in RStudio

# Description

Tools in RStudio offer a powerful framework for supporting project management and creating reproducible code. This one-hour class focuses on data and project management using R and RStudio. Specifically, this class will introduce students to best practices for scientific computing and provide techniques for managing projects and producing reproducible code. This intermediate-level course is designed to be relevant to students from different disciplines. Students are expected to have prior experience with R and RStudio. Students are encouraged to install [R](https://mirrors.nics.utk.edu/cran/) and [RStudio](https://www.rstudio.com/products/rstudio/download/#download) before the webinar so that they can follow along with the instructor. Attendees will need to download the class data before the webinar.

Upon completion of this class students should be able to:

* Create a new R project using a GitHub repository
* Discuss best practices for organizing data in an RStudio project
* Distinguish between pulling and pushing data from a repository
* Create an R-markdown document
* Create a bibliography and link it to an R-markdown document
* Ensure that their data is machine readable
* Define the term tidy data and its role in reproducibility
* List the recommendations for tidy data
* Discuss the importance of using a data dictionary and read me files

Project teaching date: Week of Oct 10